DOCUMENT RESUME

ED 288 627 PS 016 963

AUTHOR Melius, Heidi Marie
TITLE Design and Construction of an Outdoor Playground To Meet the Developmental Needs of Infants and Toddlers.
PUB DATE 87
NOTE 73p.; Ed.D. Practicum, Nova University.
PUB TYPE Dissertations/Theses - Practicum Papers (043)

EDRS PRICE MF01/PC03 Plus Postage.
DESCRIPTORS Age Differences; *Construction (Process); *Design Requirements; Early Childhood Education; *Facility Planning; Infants; Play; *Playgrounds; Rating Scales; Toddlers

ABSTRACT

This practicum involved the design and construction of an outdoor playground for infants and toddlers. The primary goal was to design and construct a playground scaled to the size and developmental needs of infants and toddlers. The second goal was to evaluate the overall playground in terms of contents, maintenance and usage. The third goal was to appraise the environment after its completion in order to identify infant and toddler play preferences, parental play preferences, and those areas of the playground which promoted the most interaction between children. (Author/PCB)

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Design and Construction of an Outdoor Playground to Meet the Developmental Needs of Infants and Toddlers

by

Heidi Marie Melius

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NOVA UNIVERSITY

Design and Construction of an Outdoor Playground to Meet the Developmental Needs of Infants and Toddlers

by

Heidi Marie Melius

Cluster XXII

A Practicum I Report Presented to the Ed.D. Program
in Early and Middle Childhood
in Partial Fulfillment of the Requirements
for the Degree of Doctor of Education

NOVA UNIVERSITY

1987

PS 016963

PRACTICUM APPROVAL SHEET

This practicum took place as described.

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July 3, 1987

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This practicum report was submitted by Heidi Marie Melius under the direction of the adviser listed below. It was submitted to the Ed.D. Program in Early and Middle Childhood and approved in partial fulfillment of the requirements for the degree of Doctor of Education at Nova University.

Approved:

August 18, 1987

Date of Final Approval of Report

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Adviser

ACKNOWLEDGMENT

A very special thankyou to Patti and Bruce Lieberman for making available the funds to bring the playground into reality. Many thanks to Larry Michalk of "Creative Wood Inc." for the hours of design collaboration and construction. The artistic talent of Bonnie Horn of "Final Touches" was especially appreciated. And finally, in the role of instructor and Director, many thanks to Marilyn Segal of the Mailman Family Center of Nova University.

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ABSTRACT

Design and Construction of an Outdoor Playground to Meet the Developmental Needs of Infants and Toddlers. Melius, Heidi M., 1987: Practicum Report, Nova University, Ed.D. Program in Early and Middle Childhood. Descriptors: Infants/Toddlers/Young Children/Early Childhood/ Playground Design/Playground Construction/Recreational Facilities/ Playground Equipment/Construction Needs/Contruction Materials/ Facility Guidelines/Facility Planning/Facility Requirements/Construction Costs/Site Development/Educational Finance

This practicum involved the design and construction of an outdoor playground for infants and toddlers. The primary goal was to design and construct a playground scaled to the size and developmental needs of infants and toddlers. The second goal was to evaluate the overall playground in terms of contents, maintenance and useage. The third goal was to evaluate the built environment in order to identify infant and toddler play preferences, parental play preferences, and those areas of the playground which promoted the most interaction between children.

Initially a survey of parental play with children out-of-doors was conducted. The author then collaborated with a playground builder to design and construct the playground according to the needs suggested by the parent survey and to meet the developmental play needs of infants and toddlers. Parents were then given a playground guide booklet and/or formal tour of the playground and told to use the following five weeks for play with their child on the playground. A written questionnaire was administered to identify play preferences and general comments from the parents. A formal playground rating system was used to evaluate the overall built environment and identify strengths and weaknesses.

Positive results of the first practicum goal were demonstrated by 30 hours of design collaboration between author and builder, 4 months of playground construction and a series of photographic slides documenting the construction process. The second goal of overall playground evaluation required the use of an adapted version of the "Playground Rating System" by Joe L. Frost (1977). The playground received 169 points out of a possible 180 points. The third goal of evaluation to identify play preferences, showed age-related patterns. The youngest age group, birth to 6 months was not fully accommodated on the playground due to the omission of a structure suited to non-crawlers.The group of children ages 6 to 12 months preferred to play on the "Bunny Trail" which encouraged standing, balancing and cruising skills. The group of children 12 to 18 months preferred to play on the "Rabbit Hill" structure which promoted walking and balancing skills. The group of children 18 to 24 months preferred the "Pretending Area".

CHAPTER I

INTRODUCTION

Description of Community

The setting is a community center in a major University in southeastern Florida. The center currently serves over 500 upper-middle class families enrolled in parent-child enrichment classes.

The basic philosophy of the center revolves around the belief in the parent as the child's first teacher. Major emphasis is placed on both the parent and the child having fun together in a learning situation.The curriculum consists of a variety of "hands-on" experiences geared towards the child's current level of development. Parents are taught to be skillful observers of their child's unique learning style during the early childhood years.

Parent-child classes are offered for children ages birth through three years of age. The earliest component of the program is the Infant Awareness Program which involves parents and their infants from birth through twelve months. The majority of the participants are women who have opted to stay home after the birth of their babies. The classes

are a chance for mothers of young children to interact with other mothers in a stimulating environment.

The author serves as coordinator of the Infant Awareness Program, and is responsible for curriculum development, teaching, and answering the special needs of parents. One component of each class is a discussion geared toward various topics and concerns relevant to the first year of parenting. These discussions create an emotional support system among the parents as concerns are shared.

The instructor has the unique opportunity of observing the changing needs and attitudes of the parents during the critical stages of the first year. It is at this time that many specific needs can be discovered and effectively answered.

CHAPTER II

STUDY OF THE PROBLEM

Problem Description

During the infant and toddler classes, parents spent time involved in a variety of structured activities with their child. There was very little opportunity for informal socializing among parents and many looked forward to spending time with newfound friends after class in a less structured environment. There was however, no specific place available on campus for parents to gather .

The center was operating at full capacity, utilizing each and every room for specific programs. Even the waiting rooms and hallways were congested, noisy places. The out-of-doors offered little respite from the hustle and bustle, as it contained a playground designed for preschoolers.

Originally, the preschool playground was designed as a place for parents to socialize wich other parents as the children played. Shaded areas were provided with seating available for adult conversation. However, the playground equipment itself, was geared toward the motor development of preschool-age children and was unsafe for infants and

toddlers. The ground covering of the playground was also inappropriate for crawling infants due to surface hardness and infestations of insects. Most importantly, the fast pace and activity level of the preschoolers created the biggest hazards for infants and toddlers. An unstable toddler could have been seriously hurt by the actions of a swift moving older child.

Because there was no outdoor area for safe exploration by infants and toddlers, parents opted to meet in restaurants, shopping malls, or private homes. Some met at nearby parks, but again found few places where the infant or toddler could be free to explore without fear of insect bites or other hazards. Consequently, babies were either held by their parents, or placed in strollers for safety, thereby limiting opportunities for movement and exploration.

PROBLEM STATEMENT: PARENTS OF INFANTS AND TODDLERS DID NOT HAVE AN APPROPRIATE OUTDOOR ENVIRONMENT IN WHICH TO INTERACT WITH THEIR CHILDREN AND SOCIALIZE WITH OTHER PARENTS. INFANTS AND TODDLERS WERE NOT FREE TO EXPLORE THE OUTDOOR ENVIRONMENT AND PRACTICE THEIR EMERGING PHYSICAL SKILLS.

Problem Documentation

During the discussion component of the Infant classes, parents had verbalized the need for an outdoor meeting place near the center. End of the semester evaluations had also given parents a chance to express concerns and comments about the program in general. Many parents had mentioned the desire to congregate in a safe, comfortable setting after class.

In order to more fully explore the requests of parents and to document their concerns, an "Infant Toddler Play Survey" (Appendix A) was administered. One hundred parents of children ages 3 months to 18 months answered written questions regarding the outdoor play needs of infants, toddlers, and parents.

Answers to the question "What would make playing out-of-doors with your child more enjoyable?" indicated the following priorities:

1.Age appropriate structures and activities
2.Availablity of shade
3.A safe, clean, bug-free environment

When parents were asked where they took their child to play with other children, the answers differed according to age. For parents of children under 12 months of age,

responses were equally divided between shopping malls, parks, and private homes. The responses of parents with children over 12 months of age showed shopping malls as no longer an option, and parks or private homes as the most popular option for play with other children.Even though parks appeared to be a popular choice among parents, the results showed 60% of all parents as being uncomfortable letting their child play on the playground provided at their favorite park.

The survey showed interesting results regarding the use of playgrounds provided at parks. For children 12 months or older, 22 out of 36 parents stated they were comfortable letting their child play on the playground at their favorite park.However, these same parents indicated the need for age-appropriate structures to make the playground a safe place. Many parents commented that they had to watch their child's every move in order to feel comfortable. Apparently, these parents were happy to be out-of-doors even though inappropriate play equipment caused concern for their child's safety.

Responses from parents under 12 months of age showed the most severe limitations on play. The majority of time at parks was spent "pushing the baby in the stroller", swinging in the swings, or occasionally playing on the ground. Rather than actively participating with their child

in outdoor play, parents of this age group were limited to passive interaction.

Causative Analysis

The creation of a setting for parents and children to congregate after class required analysis of space useage within the center. Housed within two floors of a three story building, the center hosted a multitude of programs and services. Not only were the parent-child programs operating at full capacity, but so were the preschool programs, the programs for handicapped children, and a variety of psycho-educational services.

When the center was originally designed, a back porch was designated as a "drop-in" room for parents and children. However, enrollment quickly expanded, and the porch was needed for an additional classroom. While the need for a visiting area for parents was critical, there was simply no space available within the building.

The second concern was lack of outdoor space for parents with their infants or toddlers. This issue had never been addressed primarily due to lack of awareness of the problem. Parents had not voiced their complaints in any unified manner, and staff members were not aware of a need.

The outdoor play needs of infants and toddlers had never received the amount of attention given to the needs of older children at the center. Staff members were more familiar with the types of outdoor play equipment available for preschoolers. Appropriate items could be ordered through commercial catalogs or seen while visiting local playgrounds. The same was not true however, for infant and toddlers. Catalogs of outdoor play equipment did not include items appropriate for infants or toddlers. Local playgrounds did not host examples of play equipment for the youngest children.

Outdoor play facilities in general, seldom included equipment constructed for the use of children under three years of age.(Frost and Klein, 1979) Because so few play environments existed with the needs of infants and toddlers in mind, parents and staff members at the center never even dreamed about the possiblity.

The Related Literature

Major theorists have stressed the importance of interaction of the child with the environment as a basis of development.(Erikson,1950;Piaget,1952;Montessori,1967) It is through unstructured and spontaneous play that the child has the greatest freedom to explore,test, and learn from feedback on their own actions. (Garvey,1977; Herron& Sutton-Smith,1971) Perceptions about the world begin to develop into basic concepts as young children experience their own bodies in relationship to objects and materials for manipulation.(Dickerson,1977)

The natural curiosity of young children propels them toward exploration thereby aiding developmental progress.(Brazelton,1969;White,1975) However, these exploratory behaviors are dependent upon an environment rich in both physical and social resources. It has been said that infants and toddlers can be likened to "explorers" limited only by the surrounding materials within reach (Cataldo,1984) and by the potential for interactions with people in the context of enjoyable, playful experiences. (Adcock & Segal, 1985)

Unfortunately, the rapid increase in the number of working mothers, coupled with the busy schedules of young

parents have served to limit the chances for exploratory behaviors of young children. Infants and toddlers are spending far too many waking hours in restrictive devices such as infant seats, playpens, walkers, strollers and car seats. There, they are not even required to make the beneficial postural adjustments they would make if they were being held or carried. (Grasselli & Hegner, 1981)

Developmentalists are concerned that playpens, bouncers and walkers restrict the child's ability to explore their surroundings.(Segal,1983) Restrictive devices can have a negative effect on the child's curiosity and create unhealthy dependencies on physical crutches.(Brazelton, 1969) Studies of families in which children were developing very well, showed little use of restrictive devices. In families where children were developing poorly, restrictive devices played a prominent role. (White, 1975)

Obstacles to optimal development can have long-term effects. Some psychologists believe that missing any physical developmental stage (creeping, crawling, etc.) may lead to deficiencies in spatial perception, left-right relationships and even to difficulty in picture and word understanding.(Caplan,1977) It has also been suggested that many classroom problems - awkwardness, perceptual-motor

or neurological dysfunctions, social and emotional inadequacies - may be prevented or lessened to a great extent by a planned program of movement and multi-sensory experiences begun in infancy. (Arnheim & Sinclair,1975; Miller,1972)

Recent research has turned to the character of the built environment and its impact on early development. (Moore,1986) Infants and toddlers are especially vulnerable to inadequacies in their environment, being more or less dependent upon adults to meet their developmental needs. Yet little concern has been given to the particular qualities which outdoor play environments for this age group should have. There are few playgrounds in the United States which are explicitly designed for infants. The closest are play yards immediately outside infant-care centers, which with few exceptions, are dreadful smaller-sized versions of tradtional play areas for older children. (Cohen,Hill,et.al.,1979) Today's infants and toddlers often lack child-oriented outdoor spaces which give them access to activities and challenges which enhance motor skills and sensory awareness.(Piers,1980)

One of the reasons for such a lack of appropriate outdoor space for infants and toddlers is the need for systematic evaluation. Early forerunners in the design of

children's play facilities, Friedberg and Berkely(1970) and Dattner (1969), were responsible for the introduction of important new ideas in the design of outdoor play environments. However, none of the designers made provisions for their designs to be evaluated. Their processes of design were intuitive and the product assessed, at best by subjective and casual observations.

This has lead to the continued use of traditional, manufactured playground equipment on our nation's playgrounds. If there were a better translation between design language and practitioners who choose the playground equipment, outside play environments would represent a better understanding of current research on playground design.

One set of studies looked at traditonal versus designed playgrounds. Hayward, Rothenberg and Beasley (1974) compared tradtional equipment playgrounds, contemporary playgrounds and adventure playgrounds. Using behavior-mapping methods, behavior-setting records and interviews with a sample of children, they found that children spent more time and engaged in more cognitive play activiites on adventure playgrounds than on contemporary, or traditional playgrounds. They also found more adult participation with children on adventure playgrounds.

Brown (1980) noted no differences on a range of social, language, and motor behaviors between more versus less

contemporary designed playgrounds. Both Van Valkenberg (1978), and Strick land (1979), found greater, longer, and more varied use of contemporary designed playgrounds than traditional playgrounds.

The nature of the equipment on playgrounds makes a significant difference in the types of play engaged in by children. Equipment which encourages higher amounts of peer interaction and sharing, such as swings, wagons versus tricycles, and rectangular versus simpler climbing structures, promotes more cooperative play.(Adcock & Segal,1983)

Other studies have shown that on traditional play equipment, children were found to spend 77% of their time in gross-motor play and only 3% of their time in dramatic play.On the creative playground with a variety of play materials available, the same children were found to engage in gross-motor play 43% of the time and dramatic play 40% of the time.(Frost and Campbell, 1977)

Since there are so few empirical studies which demonstrate responses of infants and toddlers to specific pieces of outdoor equipment,(Steele & Nauman,1983), broad design implications must be drawn from research on older children. Specific adaptations can then be made to meet the very different developmental play needs of infants and toddlers.

CHAPTER III

ANTICIPATED OUTCOMES AND EVALUATION INSTRUMENTS

Statement of General Goals

Major goals for this practicum were threefold. The first goal was to design and construct an outdoor playground to meet the developmental needs of infants and toddlers. The second goal was to evaluate the overall playground as a finished product.The final goal was to evaluate the playground to determine age-related patterns of play preferences.

Behavioral Expectations

In order to achieve the general goals of the practicum, specific objectives were developed. For the first goal of design and construction of the playground,it was necessary to study previous designs of playgrounds for older children and adapt the designs to the scale, size, and developmental needs of infants and toddlers. The ideas for design adaptations, then had to be translated into a blueprint for action with the playground builder.

The second general goal of evaluating the overall playground as a finished product, required adaptation of an existing playground rating system by Joe L.Frost(1977). The rating system contained three sections for evaluation. The sections of the evaluation looked at the contents of the playground, maintenance and function of the playground. Adaptations were made for questions which identified behaviors inappropriate to infant and toddler development.

The third general goal of evaluating the playground to determine age-related patterns in the play preferences of infants and toddlers, was achieved through the use of a parent questionnaire. Self-reported information from the parents would determine whether children of a specific age group tended to play on one area of the playground more than another. Responses would indicate whether parents also had a special area of the playground which they preferred for play with their child.As a final point of evaluation, parental responses would show which areas of the playground tended to promote the most interaction between children,and help establish age-related patterns of interaction.

Evaluation Instruments

Due to the scarcity of literature available on playground evaluation, it was necessary to speak with experts in the field of playground design to determine the appropriate instrument or technique to use in evaluation of an infant/toddler playground.

The majority of evaluations on playgrounds are "post-occupancy" evaluations.(Moore,1982) The entire built environment is assessed to determine what works and what doesn't work. This is usually done by observation- "behavioral mapping" - although questionnaires and interviews of children can be helpful.(G.T.Moore, Personal Communication, Aug.15, 1986) Anecdotal reporting can be useful when evaluating the environment as well.(L. Shaw , Personal Communication, August 18, 1986)

Playground designers usually develop their own rating scale and checklists depending on what it is they wish to evaluate. There are to date, no standardized scales for playground evaluation.(J.Frost, Personal Communication, August 30, 1986) Dr. Frost recommended his own survey from "Children's Play and Playgrounds" (1983) as a source for evaluation of an infant/toddler playground.

Plans for evaluating the goals of this practicum included both formal and informal measures. For the first goal of designing and constructing the playground, the number of hours spent in the design process was recorded in the practicum log book. A final drawing of the playground design used by the builder was ample evidence of the coordination of efforts between designer and builder. The construction procedure itself was documented by a series of photographs and slides to be used at a later time in demonstrating the process.

The second goal to evaluate the overall playground as a finished product was achieved by the use of "The Playground Rating System" as recommended by Joe Frost. All sections were utilized in the evaluation procedure except certain questions which were not applicable to infants and toddlers.

For example, one item read, "Easy access from outdoor play areas to coats and toilets." In the evaluation of the infant and toddler playground, toilets were of little concern since the children were not toilet trained. Other examples include items which were not totally applicable to the play needs of infants and toddlers. For instance, "Semi-enclosed spaces to read, work a puzzle, or be alone.", was only partially applicable. The portion of the item "or be alone." was used as a question to be evaluated.

the balance of the question was marked N.A. (Not Appropriate) on the rating sheet.

The third goal of evaluation was to determine age-related play preferences for the playground. This was achieved by use of a self-made questionnaire.(Appendix C) It was administered to all parents of children under two years of age enrolled in classes at the center. Parents were encouraged to play on the playground with their child and observe their child at play before responding to the questionnaire.

Parental responses were used to determine whether children preferred one area of the playground over another, and whether parents themselves had a preference for one area in which to play with their children. Additionally, responses to the questionnaire helped to determine which area of the playground tended to promote the greatest amount of interaction between children, and if there was an age-related pattern for interaction.

CHAPTER IV

SOLUTION STRATEGY

Discussion and Evaluation of Solutions

The task was to design and build an outdoor play environment which allowed parents to interact with their infant or toddler and to socialize with other parents. The play environment also had to be appropriate for infants and toddlers to encourage exploration, motor development and socialization skills.

Since there were so few playgrounds built specifically for infants and toddlers, it was difficult to compare one design with another. One positive example worth highlighting was Pacific Oaks College in Pasadena , California. The play environment was designed in a series of developmental stages, from safe crawling spaces for the youngest infants to low climbing ramps, slides, and look-out places for older toddlers. (Ferguson, J. 1979) The area was designed using environmental controls to monitor a child's safety. Children were able to use natural barriers as cues for appropriate behavior. These environmental cues gave infants and toddlers more opportunities for choice and learning. (R.Cooper,personal communication, September 15, 1986)

One recent example of research related to the same population of children evaluated which type of play equipment could be provided for children ages one to three years. (Steele, C. & Nauman,M., 1985) Findings indicated that infants from 10 to 20 months frequently engage in active play with a large sandbox, an open cube without a cover, and a simple slide.These data were only applicable for the one to two year age range in question, not for children under 10 months of age. In order to determine an appropriate playground design for children ages birth to two years, further examination of playground designs for older children was necessary.

Description of Selected Solutions

The following general design principles and models for play were adapted for the specific needs of infants, toddlers and parents:

In order to accommodate all age groups with appropriate sized equipment, the design had to be scaled to a variety of dimensions and abilities. (Appendix D)

The designed environment had to respond to the infants and toddlers changing scale and posture in order to provide a range of increasingly more challenging tasks. (Appendix E)

The surface of the playground needed to be considered a determinant for how the playground was organized, where certain activities take place, and how children get from one area to another. (Appendix F)

Even though infants and toddlers do not engage in role-playing and make-believe themes as extensively as preschoolers, a good playground design had to afford the opportunity for learning and practicing these skills. (Appendix G) Included in the design was an area with small moveable parts to include in make-believe play.

The use of nature as a learning experience was also considered to be an important adaptation for the infant and toddler playground.(Appendix H) A small container garden was included as a part of the playground design.

After making adaptations from various theories and models of playground design, specific plans had to be developed for one comprehensive plan. A playground builder had to be found and worked with in order to bring theory into practice.

Report of Action Taken

Design Phase

The original idea of a playground for infants and toddlers came from a theoretical paper on infant development. The playground existed on paper only, and in general concept form. There were no specifics regarding heights or sizes of boards to be used. Rather, it was a dream form. (Appendix I)

Once the implementation phase of this practicum began, and a builder was found, it took approximately 20 hours of planning time to translate the dream into reality. The process of breaking each piece of play equipment down in to board size, exact dimensions, and textures, was a tedious, but exciting task.

Measurements of infants and toddlers in various postures needed to be taken during class time with the parents, as there were no standard reference books to use for dimensions of railing heights, step elevations, or degree of incline. The concept of an infant/toddler playground was so unique to the builder, that every detail had to be methodically planned and executed in drawing. The final draft of the design refected many hours of study and thought.(Appendix J)

Construction Phase

The playground design was presented to the Director of the center along with a tentative cost figure. The estimate was $2 thousand over the initial budget of $5 thousand. A compromise was made by eliminating the "Rabbit Nest" from the playground design, which brought the contracted fee to $5,450.oo

The projected time for playground construction was two months. The actual time was just over four months. Progress on construction was much slower than expected due to a variety of reasons. The first major complication arose when a 500 gallon gas tank was discovered under the exact site planned for the "Rabbit Hill" structure. The Director was out of town for a week during this time and no decision could be reached until her return. The problem was finally resolved by relocating the "Rabbit Hill" structure five feet further to the north, into the adjoining preschool playground.

Another major complication arose when the builder experienced business difficulties and had to discontinue work for one entire month. The problems were eventually solved and the builder was able to complete the playground as originally planned.

The builder fulfilled his obligations as written on the contract, however, the playground was far from complete. Structures existed where previously none had existed, but the overall look of the playground was not finished. At this point, a conference was arranged between the designer, builder, and the Director.

At the conference, it was agreed that the playground needed additional construction, and that $2.5 thousand would be made available to complete the project. The builder met with the designer for a total of ten hours to make final plans for construction.

A new contract was presented to the Director and approved immediately for check release as requested by the builder. The check did not arrive on the day promised which almost forced the builder to commit to another job in order to keep his business solvent. Luckily, the check was made available within an extended time period granted to the center by the builder and he was able to continue on the playground project. Failure to receive the check would have caused another month or two delay.

One major set-back occurred in the practicum process as a result of a back injury to the author. Three weeks were spent at home in bed, and all work had to be done via telephone. The final check-through of the playground construction was done by the Director. The builder had fulfilled his obligations and there remained only finishing touches to make the playground a completed project.

A polished look was given to the playground by the addition of a variety of details. Sand was ordered and placed in appropriate places by the physical staff. The sprinkler system was capped in order to protect the newly built wooden structures from water damage. Sod was placed in two small areas of the playground, and the sidewalks were painted a cheery color to enliven the overall appearance.

One very special finishing touch was a wall mural designed to compliment the Peter Rabbit theme of Beatrix Potter. A local artist spent over 46 hours preparing the wall and painting the mural.

A date was set for the grand opening of the playground. Plans were made for inviting the public and over 300 invitations were sent to a local parenting center for dispersal. Invitations were also sent to department heads within the University.

Contact with local media was made through a news release sent to all major newspapers, radio stations, and community service bulletins. During the week prior to the grand opening, three telephone interviews were held with local newspapers. One paper carried an excellent feature story which resulted in several inquiries about the playground and the programs at the center.

The grand opening of the playground was a huge success. The weather was picture-perfect and the turnout more than expected. Over 70 people, including University officials, alumni, parents with children and staff members were present to hear speeches and witness the ribbon-cutting ceremony. Guests received a complimentary copy of the playground guide (Appendix K) and watched children experience the newly built structures.Reporters from two major papers were in attendance and feature stories were run in both papers on subsequent days.

In the days following the grand opening, parents were invited to play on the playground with their children. Teachers also scheduled class visits to the playground and formally taught the parents about the possibilities for play. Playground guides were handed out in all of the classes for children two years and younger.

Many parents gave positive feedback about their initial experiences on the playground.Comments such as "The little booklet was a big help in giving me ideas on how to use the playground.", "My child loves the playground so much he doesn't want to leave.", and "Great job! Thanks so much!" indicated the pleasure parents were experiencing on the playground.

CHAPTER V

RESULTS, CONCLUSIONS AND RECOMMENDATIONS

Results

The accomplishment of creating a playground design which accommodated the developmental needs of infants and toddlers was achieved through untold hours of examining models of playgrounds for older children. A total of 30 hours were then spent in collaboration with a playground builder to translate design ideas into a final playground design.

The construction of the playground was documented by a series of photographic slides collected over the four month building period. The slide presentation demonstrated the various stages of construction and the actual use of the playground by infants and toddlers.

The total cost of the playground was $8,680.00. Actual construction costs were $7,950.00.The cost of the mural preparation and painting was $580.00. Extra equipment such as riding toys, sand toys, and housekeeping materials for the pretending area made up the balance of the total cost.

Evaluation Results

The second major goal of the practicum was to evaluate the overall playground and the play experiences of infants, toddlers and parents.The following results are from the Playground Rating System by Joe L. Frost (1977).

Section I: What does the playground contain?
This section was originally scored as a total of 100 points, however, four questions were judged inappropriate for the developmental play needs of infants and toddlers.These questions were omitted , which left a total of 80 points.

The playground was evaluated at 66 points due to the following weaknesses:Item 6-"trees and natural areas", Item 7- "zoning", and Item 8- "water play areas".One point was subtracted for each of these items as they had not been sufficiently provided for in the playground design.

Item 16- "provision for pets" and Item 17-"transitional space", had not been included in the playground design. Both items could have been considered in the design, thus the point values of zero for each, reflected the lack of planning.

Section II:Is the playground in good repair and relatively safe?

Each item in this section was appropriate for evaluation of the infant/toddler playground. Out of a possible 50 points,

a total of 49 points were scored. The only weakness in the playground safety was noted in item 2 "Eight to ten inches of noncompacted sand under all climbing and moving equipment..". Only 4 out of 5 points were given to this item due to the placement of "Rabbit Hill" next to a cement sidewalk. Even though infants and toddlers were protected from falling by a four foot high railing, the possibility existed of older children coming onto the playground and getting hurt . The playground was intended for children under two years of age; for that age group, it was deemed safe.

Section III: What should the playground do? All items were applicable for evaluation of the infant/toddler playground. Certain items contained portions of the question which were not appropriate for the younger children, and were omitted. For example, item 4 contained two sub-elements, "systematic storage" and "semi-enclosed space to read". The item was scored for "systematic storage" only, as the other sub-item was inappropriate to the infant/toddler population. Out of a possible 50 points, 49 points were earned.

Overall Evaluation: Out of a possible 180 points, 169 points were granted to the playground. Any item which did not receive maximum credit will be considered for future modification and change.

Questionnaire Results

The written questionnaire" The Peter Rabbit Play Yard", was administered during the sixth week after the playground's official opening.All parents of children under two years of age, who attended class that week, were given a questionnaire to complete . A total of 151 were returned and it was found that 76% of the parents had spent time with their child on the playground . From the group of parents who had played on the playground, results were grouped according to the child's age.Differences between age groups, in terms of playground useage, are summarized in the following paragraphs.

Children six months or younger:

Even though all parents had received the playground guide and a tour of the playground during classtime, only 3 out of 22 parents had spent time with their child on the playground. Those that had, chose the "Swing Area" as favorite.

Comments from parents such as, "My child is too young to use the playground at this time." , or "I look forward to using it once the baby is mobile.", verified the notion that the playground did not address the needs of very young infants. For children who were non-crawlers, the only area which held any play value was the "Swing Area".

The original playground design contained a "Rabbit Nest" which was an enclosed area with swings for babies, swings for parent and child, and places to let the infant

rest and visually scan the environment. If this structure had been built, the play needs of very young infants would have been met.

Children six to twelve months:

All parents in this age group received a playground guide along with a guided tour . Out of 55 respondents, 43 had spent time with their child on the playground at least once per week.Out of the 43, 6 came to visit the playground additional times other than before or after class.

Areas of Play:

1.The favorite place to play for the child, was the "Bunny Trail" .

2.The favorite place for the parents to play with children was "The Bunny Trail" and the swing area.

3. The area which promoted the most interaction between children was the "Bunny Trail".

The questionnaire results clearly indicated the "Bunny Trail" as a favorite play space. A simple explanation for this result , is the developmental needs of children during the 6 to 12 months period. Infants practice the skills of pulling to stand, balancing, cruising along objects, and walking. The "Bunny Trail" affords practice in all these basic skills.

Children above 12 months to 18 months:

Playground guides were given to parents in class and the playground was experienced as part of the curriculum. Questionnaires were given to parents in class. Some parents were unable to complete the questionnaire due to the activity level of their children. These parents asked to complete it at home and return it the following week.

Out of the 40 respondents, 39 had spent time on the playground with their child. The majority had spent one time per week on the playground. There were 5 parents who spent more than one time per week on the playground, and came at times other than before or after class.

Areas of Play:

1. According to parental report, the favorite place to play for the children was the "Pretending Area". "Rabbit Hill"was cited as a second choice.

2. According to the parents, their favorite place to play with their children was also the "Pretending Area". "Rabbit Hill" was cited as a second choice.

3. Parents reported the "Pretending Area" as the area which promoted the most interaction between children. The "Sensory Area" was cited as a second choice.

The questionnaire results indicated the "Rabbit Hill" and the "Pretending Area" as favorite places to play. When

the developmental skills of walking with balance and learning to pretend, are considered, the play structures named as favorites encouraged those emerging skills.

Children above 18 months to 2 years of age:

The playground guide was given to parents in class. Parents were encouraged to play on the playground with their child as often as possible. Questionnaires were then administered in class. As with the previous age group of children, the parents found it difficult to complete the questionnaire in class. Many parents asked to finish it at home and return it the following week.

Out of the 34 respondents, 31 had spent time with their child on the playground at least once per week. There were 6 parents that brought their children to play more than one time per week.One parent reported bringing her son daily, as part of their routine.

Areas of Play:

1.According to parental report,the favorite place to play for the children was "Rabbit Hill". The "Pretending Area" was cited as a second choice.

2.The parents reported their favorite place to play with their children as the"Swing Area" and the"Pretending Area" as a second choice.

3.According to parental report, the"Pretending Area" promoted the most interaction between children.

When looking at the developmental agenda of children in the 18 to 24 month old group, the favorite place to play was the "Pretending Area". The skills of make-believe and role-playing were given an appropriate outlet in this area.

General Comments:

Parents were asked on the questionnaire to give any comments or suggestions they might have to make the playground a better place to play. Constructive criticism was given regarding a need for more shade, more riding toys for the children, lower benches for the children to sit on, an occasional problem with red ants, and the playground being available during the weekends.

Parents were also asked to help make the "rules" of the playground. The majority of parents were unable to think of specific "rules", but some gave excellent suggestions. Some of the ideas included: "Children under two years of age only.", "Parents please supervise your children.","Please help the children learn to share toys.", "Be sure to help your child pick up after play.", and "Nofood allowed on the playground." These suggestions will be discussed among the staff and posted at a later date.

Parents also gave praise and appreciation for the playground and looked forward to spending more time on it. Many parents commented on the unique chance to relax while

their children were at play in a safe environment. One parent commented, "It is so nice to have my child go home from the playground tired, instead of me !"

Recommendations

The following recommendations would prove useful in replication of this practicum experience:

1. In terms of sharing important information during the planning and construction phase of the practicum, an organized system for dispersal among involved persons is necessary. Facts should be written in triplicate and hand-delivered to project managers to avoid confusion.
2. Before the playground construction is completed, the issue of playground maintenance should be determined. Assign one person to be in charge of playground supervision, and ask supporting staff to participate in specific tasks on the playground.
3. In order to enhance the quality of play , the following additions should be constructed on the playground. The first addition would alleviate the problem with heat from the blazing summer sun. Awnings should be constructed over the "Swing Area" and the "Bunny Trail". These areas receive direct sun all day long and become extremely hot after the early morning hours. Approximately $2 thousand would be needed to complete this addition of canvas awnings.

The second recommendation for additions to the playground would include the carpeting of the sand area around "Rabbit Hill". The area would become more useful to crawling infants and toddlers whose parents are reluctant to let their child play in the dirty sand. The cost would be approximately $8 hundred.

Thirdly, the developmental play needs of the youngest infants must be accommodated by the construction of a "Rabbit Nest" structure. This house-like structure would create additional seating, hammocks and swings to be enjoyed by parents and infants together. The projected cost of this "Rabbit Nest" would be $1.5 thousand.

Plans for Dissemination

A significant amount of dissemination has already been accomplished for this practicum experience. The playground was presented to a group of Master's students in the Early Childhood Education program at Nova University. The slide presentation and playground were also shared with fellow Ed.D. students at Nova University. A request has also been received to present the slide demonstration to the staff members at the "Discovery Center" in Fort Lauderdale.

The playground has also been shared as a model design for infant and toddler environments. The Director of an area child care center came to visit the playground with her architect. The author was able to spend time in discussion of ideas to suit the needs of tne Director's center, and made suggestions for changes necessary to enhance the overall play experience.

A public school principal and support staff came to view the playground and discuss ideas for adaptations for their exceptional student population. Two hours were spent in discussion and planning with the author, the builder, and the public school personnel.

Plans for future dissemination include a "Poster Session" at the Summer Institute for Nova University to be held in Fort Lauderdale, and the submission of an article about the playground to "Young Children" and "Child Care Center" magazines.

A proposal was written and accepted for presentation (Appendix L) at the Mid West Association for the Education of Young Children conference which was held in April in Detroit Michigan. The author was unable to attend due to illness, but looks forward to future conference presentations.

On a local level, it is hoped that the slide show will be viewed by many area child care workers. Perhaps the presentation will encourage other caregivers to begin

plans for construction of outdoor playgrounds which will meet the developmental play needs of infants and toddlers.

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APPENDIX A

INFANT/TODDLER PLAY SURVEY

Please circle the most appropriate respponse, according to the following rating scale:

1 -Never, 2-Seldom, 3- Sometimes, 4- Often, 5 -Always

1. Where do you take your baby to play and meet with other parents and children?

Shopping Malls	1	2	3	4	5
Parks	1	2	3	4	5
Friend's Homes	1	2	3	4	5

2. When at shopping malls, how is the child positioned?

Held by parent	1	2	3	4	5
In a stroller	1	2	3	4	5
On the floor	1	2	3	4	5

3. When at the park, what do you do with your child?

Walk using the stroller	1	2	3	4	5
Swing in the swings	1	2	3	4	5
Play on the ground	1	2	3	4	5
Climb on structures	1	2	3	4	5
Slide on the slide	1	2	3	4	5

Other:_____

4. Do you feel comfortable letting your baby play on the playground provided at your favorite park?
Why?_____

_____

5. At parks, what would make playing out-of-doors with your child more enjoyable?_____

_____

APPENDIX B

PLAYGROUND RATING SYSTEM*

Instructions: Rate each item on a scale from 0-5. High score possible on Section I is 100 points; Section II is 50 points and Section III is 50 points, for a possible grand total of 200 points. Divide the grand total score by 2 to obtain a final rating.

Section I. What does the playground contain?

Rate each item for degree of existence and function on a scale of 0-5 (0 = not existent; 1 = some element(s) exists but not functional; 2 = poor; 3 = average; 4 = good; 5 = all elements exist, excellent function).

5 1. A hard-surfaced area with space for games and a network of paths for wheeled toys.

5 2. Sand and sand equipment.

5 3. Dramatic play structures (play house(s), old car or boat with complementary equipment, such as adjacent sand and water and housekeeping equipment).

5 4. Climbing structure(s) (with room for more than one child at a time and with a variety of entries, exits and levels).

5 5. Mound(s) of earth for climbing and digging.

4 6. Trees and natural areas (including weed areas).

4 7. Zoning to provide continuous challenge; linkage of areas, functional physical boundaries, vertical and horizontal treatment.

4 8. Water play areas, with fountains, pools and sprinklers.

N.A. 9. Construction area with junk materials such as tires, crates, planks, boards, bricks and nails. Tools should be provided and demolition allowed.

N.A. 10. An old vehicle, train, boat, car that has been made safe, but not stripped of its play value. (This item should be changed or relocated after a period of time to renew interest.)

5 11. Equipment for active play: A *slide* with a large platform at the top (best if slide is built into side of a hill); *swings* that can be used safely in a variety of ways (use of old tires as seats); *climbing trees* (mature dead trees that are horizontally positioned); *climbing nets.*

N.A. 12. A large grassy area for organized games.

5 13. Small private spaces at the child's own scale: tunnels, niches, playhouses, hiding places.

5 14. Fences, gates, walls and windows that provide security for young children and are adaptable as opportunities for learning/play.

5 15. Natural areas that attract birds and bugs. A garden and flowers located so that they are protected from play, but with easy access for the child to tend them.

*Joe L. Frost © 1977

0 16. Provisions for the housing of pets. Pets available.

0 17. A transitional space from outdoors to indoors. This could be a covered play area immediately adjoining the playroom areas which will protect the children from the sun and rain and extend indoor activities to the outside.

4 18. Adequate protected storage for outdoor play equipment, tools for construction area, and maintenance tools. Storage can be separate, wheel toys stored next to the roadway; sand equipment near or next to the sand enclosure; tools in the workshop area. Or storage can be the lower level of the climbing structure, or separate structures attached to the building or fence. *But storage should aid in pick-up* (that is, make it easy for children to put equipment away at the end of each play period).

NA 19. Easy access from outdoor play areas to coats and toilets.

5 20. Places for adults, parents and teachers, to sit within the outdoor play areas. Shade structures with benches can provide for this as well as for seating for children.

Section II. Is the playground in good repair and relatively safe?

Rate each item for condition and safety on a scale of 0-5 (0 = not existent; 1 = exists but extremely hazardous; 2 = poor; 3 = fair; 4 = good; 5 = excellent condition and relatively safe yet presents *challenge*).

5 1. A protective fence next to hazardous areas (streets, etc.).

4 2. Eight to ten inches of noncompacted sand (or equivalent) under all climbing and moving equipment, extending through fall zones and secured by retaining wall.

5 3. Size of equipment appropriate to age group served.

5 4. Area free of litter (e.g., broken glass, rocks).

5 5. Moving parts free of defects (e.g., no pinch and crush points, bearings not excessively worn).

5 6. Equipment free of sharp edges, protruding elements, broken parts, toxic substances.

5 7. Swing seats constructed of soft material (e.g., rubber, canvas).

5 8. All safety equipment in good repair (e.g., railings, padded areas, protective covers).

5 9. Fixed equipment secure in ground and concrete footings recessed in ground.

5 10. Equipment structurally sound. No bending, warping, breaking, sinking, etc.

Section III. What should the playground do?

Rate each item for degree and quality on a scale of 0-5 (0 = not existent; 1 = some evidence but virtually nonexistent; 2 = poor; 3 = fair; 4 = good; 5 = excellent). Use the space provided for comments.

5 1. Encourages Play:
Inviting, easy access
Open, flowing and relaxed spaces
Clear movement from inside to outside
Appropriate equipment for the age group

5 2. Stimulates the Child's Senses:
Change and contrasts in scale, light, texture and color
Flexible equipment
Diverse experiences

5 3. Nurtures the Child's Curiosity:

Apppendix B

Equipment that the child can change
Materials for experiments and construction

4 4. Allows Interaction Between the Child and the Resources:
Systematic storage which defines routines
Semi-enclosed spaces to read, work a puzzle, or be alone

5 5. Allows Interaction Between the Child and Other Children:
Variety of spaces
Adequate space to avoid conflicts
Equipment that invites socialization

5 6. Allows Interaction Between the Child and Adults:
Easy maintenance
Adequate and convenient storage
Organization of spaces to allow general supervision
Rest areas for adults

5 7. Supports the Child's Basic Social and Physical Needs:
Comfortable to the child
Scaled to the child
Free of hazards

5 8. Complements the Cognitive Forms of Play Engaged in by the Child:
Functional, exercise, gross-motor, active
Constructive, building, creating
Dramatic, pretending, make believe
Organized games, games with rules

5 9. Complements the Social Forms of Play Engaged in by the Child:
Solitary, private, meditative
Parallel, side-by-side
Cooperative interrelationships

5 10. Promotes Social and Intellectual Development:
Provides graduated challenge
Integrates indoor/outdoor activities
Involves adults in child's play
Adult-child planning
The play environment is dynamic—continuously changing

APPENDIX C

EVALUATION OF THE PETER RABBIT PLAY YARD

In hopes of perfecting the infant/toddler playground, we would like you to take a moment to answer the following questions:

1. Your child's age:_____

2. Did you receive a Peter Rabbit Play Yard Manual?_____

   Did you read it? _____

   Did you find it useful as a guide to play? _____

3. Have you spent time with your child on the playground?_____

   How often do you spend time on the playground? Check one:
   Once a week_____
   2 times a week_____
   3 times a week ____
   More _____

   Do you come to the playground any time other than before or after class? _____

4. Consider the following areas of the playground:

   Rabbit Hill (wooden structure)
   Bunny Trail (cruiser's area)
   Peter Pretends (play house, sand area)
   Sensory Spot (deck area)
   Swing Low (swing set)

   Which is you child's favorite place to play?_____

   Which is your favorite place to play with your child?_____

   Which area promotes the most play between your child and other children?_____

5. What suggestions do you have for making the playground a better place to play?
   _____

   _____

6. Every playground has a special set of "rules" to keep it a safe and happy place. Based on your experiences and observations can you help us think of the special "rules" for our playground?

   _____

LINKED PLAY ENVIRONMENTS
(Friedburg and Berkeley, 1970)

Concept: An environment for all age groups, which contains elements of high complexity and wide potential choice will stimulate linked play behavior.

Behaviors to be facilitated:

1.Play among all age groups

2.Play as a way for learning

Specified Properties of the Physical Environment:

1.Linked play environments

2.Use of modular design

3.The more complex the playground, the greater the choice and the more enriched the learning experience.

Adaptations for Infant Toddler Playground Design:

1.Accomodate adults as well as children, with appropriate sized and comfortable seats and benches in shaded areas.

2.Create a Cruiser's Trail with modular moveable boxes.

3.Link different areas and spaces with clear pathways, both physically and visually.

4.Create a section of small manipulatives in sheltered areas.

VARIETY OF SPACES AND SCALES

Concept: The number of different kinds of units can be called the degree of variety and is a measure of the relative capacity of the space to elicit immediate interest from the children. (Kritchevsky, Prescott, Walling, 1974)

Physical Properties of the Environment:

1. Variety of physical space useage: (Moore,1974)
   a. Leave some places fixed, unchanging to provide familiarity, security and stable identity.
   b.Leave some resources loose, changeable, openended.
   c.Create some spaces open - big and challenging.
   d.Create some small, intimate spaces.
2.Make "child caves" large enough to accomodate groups of children(3-5) and keep ceiling heights low (2ft. 6 in.), and the entrance tiny. (Alexander, et. al., 1977)
3.Use a variety of play units:
   a.simple-one obvious use, e.g.swings
   b. complex - contains subparts of two essentially different play materials which enable child to manipulate and improvise, e.g. sand table with digging equipment.
   c. Super - a complex unit which has one or more additional play materials juxtaposed, e.g. sand box with play equipment and water.

VARIETY OF SPACES AND SCALES (continued)

Behavior to be facilitated:

1. Increased amount of social interaction in small groupings.
2. Cooperation is enhanced when there are places to hide. Hiding serves two purposes: First, as way stations in games of chase, and secondly, as private places where shy children can engage in cooperative play on a small scale.(Adcock & Segal, 1983)

Adapatations for the Infant/Toddler Playground design:

1. The designed environment and the equipment within, must be responsive to the infant's changing scale and posture - from crawling with eye level at 6 inches above ground to standing at 20 inches, and reaching to 6-8 inches above.(Central Mortgage, 1978)
2. A variety of developmentally appropriate equipment will provide a range of increasingly more challenging tasks.Gradually sloping slides, ramps and sets of carpeted steps, using 3 to 4 inch rises between levels.

APPENDIX F

SURFACE - THE MAP OF THE PLAYGROUND

Concept: The surface of a play area is like a sign post. It can give directions or designate a certain activity. Decisions about surfaces determine how the playground will be organized, where certain activities will take place, and how children will get from one area to another. (Cheek, 1973)

Behavior to be facilitated:

1. Exploration of different sensory surface materials.
2. Clear understanding of activity areas and flow of movement from one area to another.

Physical Properties of the Environment:

1. Vary surface texture according to activity zone:
   a. Soft cushioning under climbing apparatus
   b. Smooth, hard surfaces for wheeled toys
   c. Vegetation and foliage in quiet, nature zones.

Adaptations for Infant/Toddler playground design:

1. Provide many different types of floor coverings, e.g. astro-turf, indoor/outdoor carpet, tiles, wood decking, sand, wood chips.
2. Wheeled toy path should be wide enough to accomodate strollers.
3. Slick, hard surface for small wheeled toys and crawling infants should be provided.

APPENDIX G

CREATIVE PLAY YARD
(Frost, 1983)

Concept: Play is fun time and exercise. But more importantly, it is also learning time.

Behavior to be facilitated:

1.Creative types of play:

a. Dramatic (role-playing and make-believe)

b.Constructive (building and fashioning the environment)

2.Cooperation:

a.Pretending naturally leads to peer group cooperation.

b.Equipment gains cooperative potential when encorporated into imaginary play themes. (Adcock and Segal, 1983)

Physical Properties of the Environment:

1.Provide a variety of materials that children can have impact upon:

a.Sand play

b.Water play

c.Wheeled toy play

d.House play

e.Play with moveable parts

Adapatations for Infant/Toddler playground design:

1.Include an area with small moveable parts which can be included into play themes, e.g. small balls for filling a wagon and moving.

APPENDIX H

NATURAL PLAY YARDS

Concept:"Animals are as important a part of nature as the trees and grass and flowers. There is some evidence, in addition, which suggests that contact with animals may play a vital role in a child's emotional development."
(Alexander, Ishikawa, Silverstein, 1977, p.372)

Behaviors to be facilitated:

1. Children learn about the way nature works through direct, personal experience.
2. Nurturing skills toward dependent creatures are fostered.

Physical Properties of the Environment:

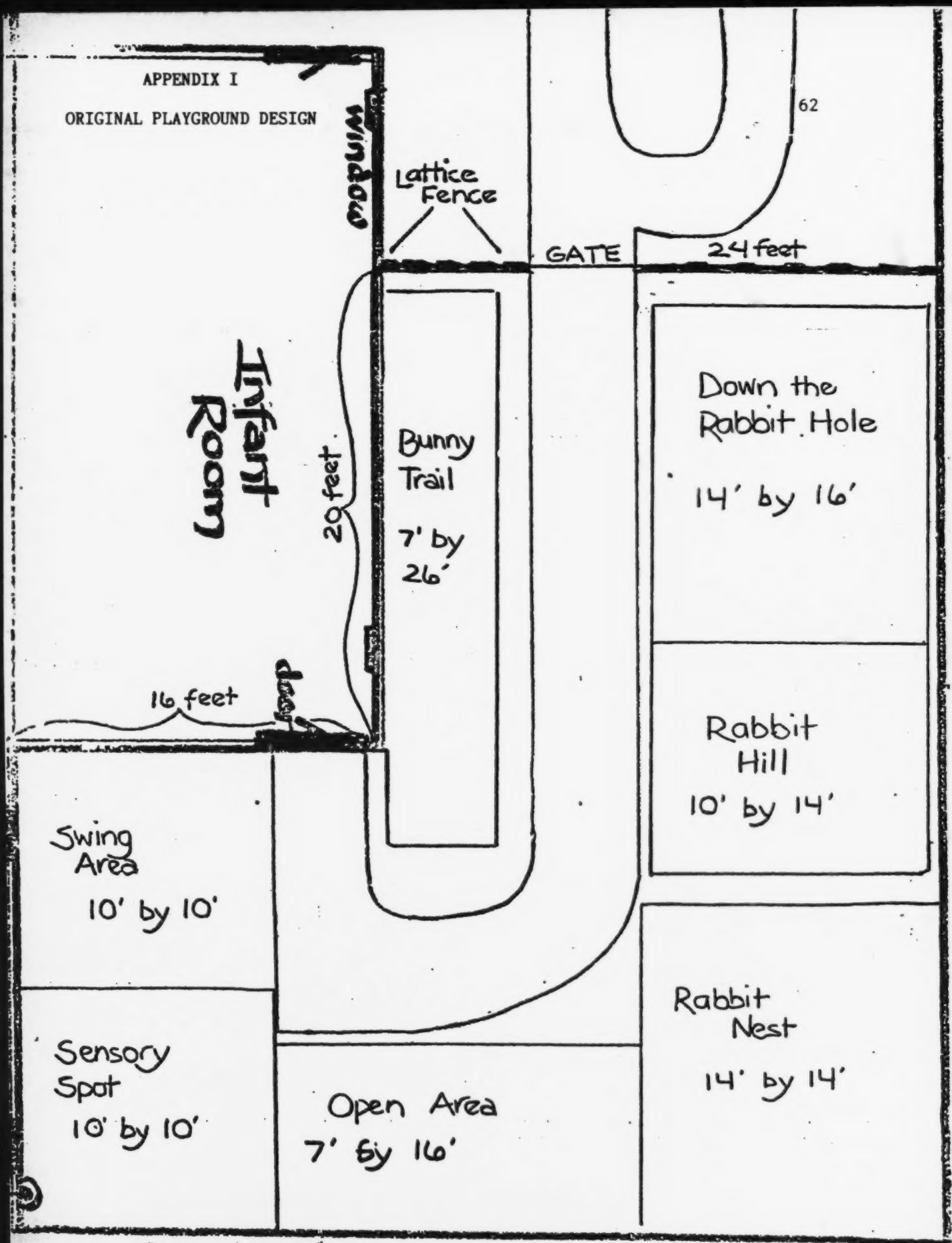
1. Create an area where nature is protected to varying degrees, and children can intermesh with living things.
2. Create areas for water play.
3. Represent diverse ecological elements, e.g. meadow, forest, orchard.

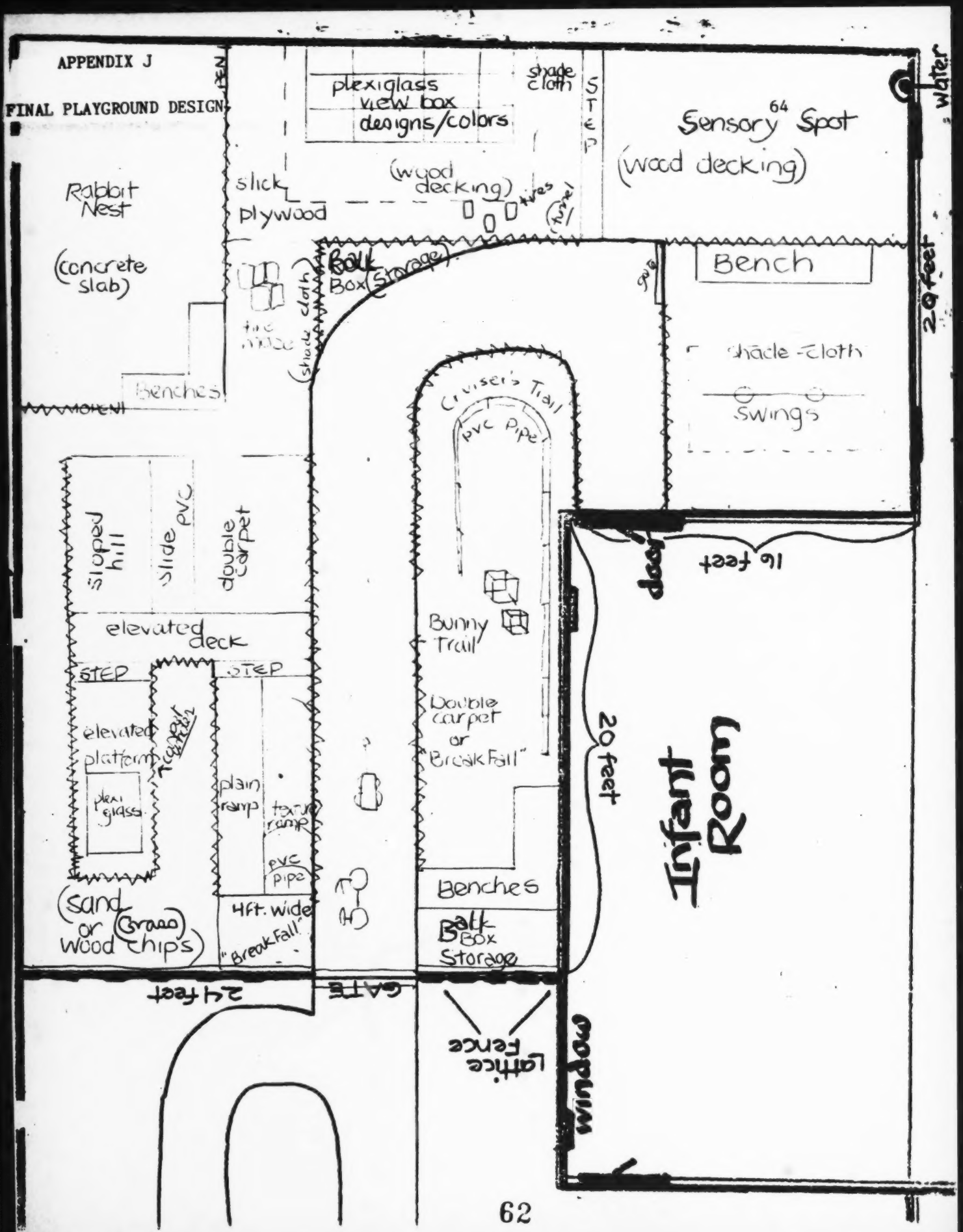
Adaptations for Infant/Toddler playground design:

1. Create area with variety of bushes, trees and plants.
2. Build container gardens for herbs and flowering plants.
3. Create an appropriate area for snails, lizards, and other insects.
4. Install and maintain rabbit hutch.

APPENDIX I

ORIGINAL PLAYGROUND DESIGN




APPENDIX J
FINAL PLAYGROUND DESIGN
plexiglass view box designs/colors
shade cloth
STEP
Sensory Spot
(wood decking)
water
Rabbit Nest
(concrete slab)
slick plywood
(wood decking)
wires
(fence)
Ball Box (Storage)
Bench
gate
20 feet
fire hose
(shade cloth)
Benches
shade cloth
Swings
Cruiser's Trail
PVC Pipe
sloped hill
slide PVC
double carpet
door
16 feet
elevated deck
Bunny Trail
STEP
STEP
Double carpet or "Break Fall"
elevated platform
plexi glass
tactile
plain ramp
texture ramp
PVC pipe
20 feet
Infant Room
(sand or wood chips)
(Grass)
4ft. wide "Break Fall"
Benches
Ball Box Storage
24 feet
GATE
Lattice fence
window

APPENDIX K

THE PLAYGROUND GUIDE

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The Peter Rabbit Play Yard

an Infant/Toddler Play Space

a guide to play . . .

An Introduction...

The addition of a newborn child into the family is a cause for great joy and celebration. Indeed, the marvelous gift of a child heightens one's awareness and love for all children.

In keeping with the tradition of service to the community, the Mailman Family Center is pleased to dedicate "The Peter Rabbit Play Yard" in celebration of the arrival of Peter Lieberman into the extended Mailman family.

A very special Thankyou! to Patti and Bruce Lieberman for making the funds available to bring the playground into reality!

Many thanks to Larry Michalk of "Creative Wood-Inc." for the hours of design collaboration and playground construction.

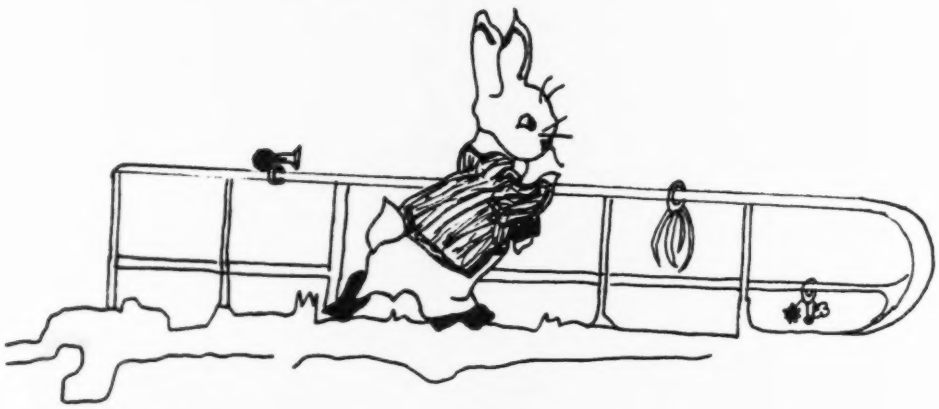
And finally, a special thank you! to Bonnie Horn of "FINAL TOUCHES" for her "Beatrix Potter" mural.

The Peter Rabbit Play Yard was designed and built as partial completion of the requirements for the Doctorate in Early and Middle Childhood Education at Nova University. Thankyou to Marilyn Segal in her role as Professor, Advisor, and Inspiration!

... A dream come true!

Heidi Marie Molinas

Bunny Trail



Features: PVC railings at 10 and 18 inch heights
Carpeted surface
Tree climber and slide
loose parts

Guide to Play:

The infants grasping and reaching skills will be encouraged by a variety of hanging items along the trail.

Cause and effect associations will be enhanced by experiences with gongs for "clanging", horns for honking and strings for pulling.

Infants will enjoy pulling up to standing then cruising along the railing. They will practise balance, as they move from railing to stable objects nearby.

Toddlers and older infants will enjoy walking with support from various riding toys, wagon walkers, poles and hoola-hoops.

A variety of balls, push toys and wooden boxes will add variety and zest.

"Swing Low" Swing Area

Features: Wooden swing set
Bench for adults
Variety of swing seats

Guide to Play:

For the infants -

there is a choice of two seats

① The canvas swing for babies gaining the strength and balance to sit.

② The hard plastic seat for babies already sitting.

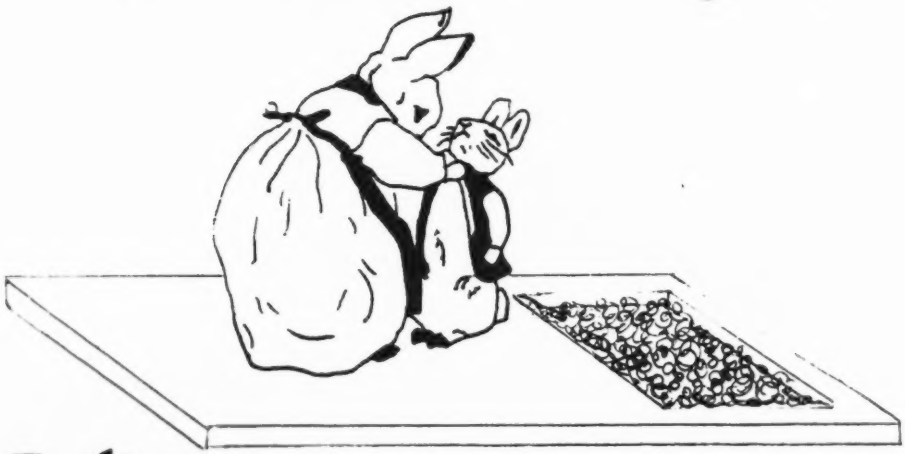
For the toddlers -

③ The black rubber bucket seats will support the child's back in a protected enclosure

Notice the younger child simply enjoying the motion of moving away, then returning again - anticipating as if in a game format.

The older child will enjoy "singing" songs along with the rhythm of the swing.

Peter Rabbit's Sensory Spot



Features: Wooden deck raised 3 inches
access to water
Slick surface area
Variety of sensory materials

Guide to Play:

Slick surface -

Infants will enjoy creeping/crawling along the slick surface, chasing balls and rolling toys.

Toddlers will enjoy pushing cars, rolling balls, and using the surface for a painting area.

Level changes -

Infants will be challenged by the 3-inch rises.

Toddlers will have an opportunity for stepping up and down.

Variety of Sensory Materials -

Infants will enjoy grasping, mouthing, manipulating various safe materials.

Toddlers will spend time scooping, filling containers, and dumping.

Peter Pretends

Features: Play house and props
Sand play area
Tunnel climber
Herb Garden

Guide to Play:

Play house and props -

Toddlers will enjoy pretending with their friends.

Sand from the container will add interest to the pretending games.

Tunnel climber -

Infants will enjoy crawling through the tunnel to find a friend on the other side.

Toddlers may play "hide and seek" games or spend quiet time "alone."

Herb Garden -

Adults may lift children to smell the flowers, water the vegetables, or simply "touch" the beautiful plants.

Rabbit Hill

Features: Hill covered in carpet
Concave slide
Platform with plexiglass floor
Plexiglass wall
Railings
Wooden ramp

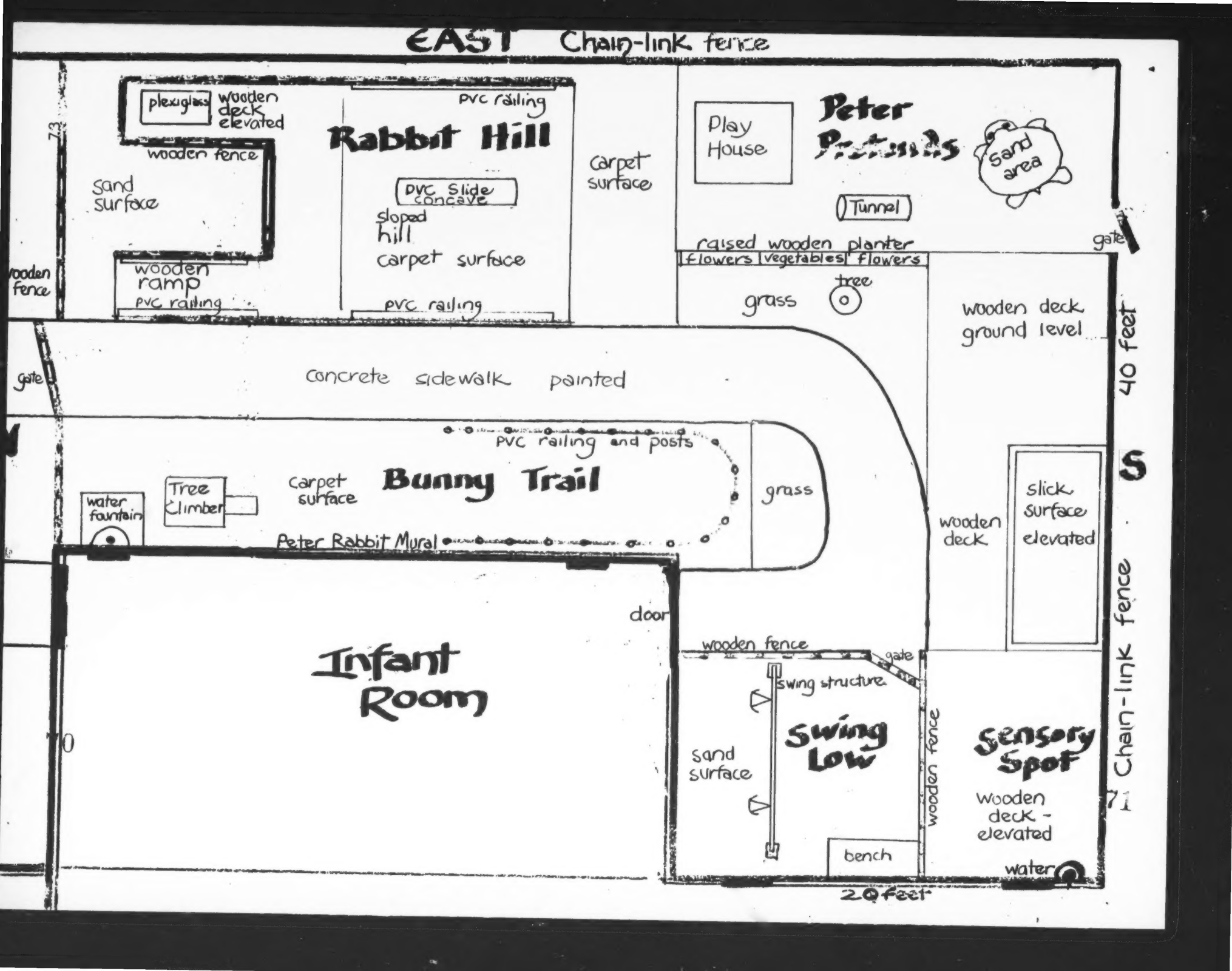
Guide to Play:

The infants will enjoy creeping or crawling up and down, on both the wooden ramp and the carpeted hill.

Older infants will be challenged to pull up to standing along the railings and negotiate the hill.

All children will find the "rabbit hole" slide an interesting experience. Infants will attempt to crawl into and out of the slide. Toddlers may prefer to back into the slide and move downward on tummy, feet first. Older children may pretend to paddle a boat or drive a car!

The platform deck with plexiglass floor will give children an opportunity to look at their world from two quite different perspectives.


EAST
Chain-link fence
plexiglass
wooden deck elevated
wooden fence
sand surface
wooden ramp
pvc railing
pvc railing
Rabbit Hill
pvc railing
DVC Slide concave
sloped hill
carpet surface
pvc railing
carpet surface
Play House
Peter Rabbits
Sand area
Tunnel
raised wooden planter
flowers
vegetables
flowers
tree
grass
gate
wooden deck ground level
40 feet
concrete sidewalk painted
gate
PVC railing and posts
Bunny Trail
carpet surface
grass
water fountain
Tree Climber
Peter Rabbit Mural
wooden deck
slick surface elevated
door
Infant Room
wooden fence
gate
swing structure
Swing Low
sand surface
wooden fence
Sensory Spot
wooden deck - elevated
bench
water
20 feet
Chain-link fence
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APPENDIX L

CONFERENCE PROPOSAL

MIDWEST ANNUAL EDUCATION OF YOUNG CHILDREN CONFERENCE

I. Presentation Title: "Meeting the Outdoor Play Needs of Infants and Toddlers"

II. Suggested Tract: Teaching practices and curricula for infants and toddlers

III. Presenter:

Heidi Marie Melius
665 N.W. 21 Street
Wilton Manors, FL.33311
(305) 565 9143

Infant Coordinator at the Mailman Family Center of Nova University

Doctoral student in the Ed.D. Program for Early and Middle Childhood Education

IV. Co-Presenter: None

V. Abstract:

"Examine an outdoor play environment to promote physical and cognitive development while enhancing pretending skills, peer interaction and the relationship between adult and child."

VI. Purpose of Presentation:

Conferees will learn how to design an appropriate outdoor environment for infants and toddlers. They will examine the process of constructing the physical environment and see examples of the playground in use. Conferees will also discuss methods for evaluating the impact of the play environment on various aspects of infant/toddler development, such as ,pretending skills, cooperation, peer relationships and adult-child interaction.

VII. Brief Summary of Presentation Content:

The presentation will focus on three aspects pf playground development. The first, Creating a Design; the second, Building the Physical Environment; and the third, The Playground in Action.

In the first section, Creating a Design, various models and theories of playground development will be examined. Adaptations made to suit the special needs of infants and toddlers will be discussed.

The second section, Building the Physical Environment, will be a slide presentation detailing the construction process. Specific problems encountered such as surfacing needs, size dimensions, etc. will be examined.

The third section, The Playground in Action, will be a slide presentation of the playground in use, highlighting physical challenges, peer interaction and adult-child relationships.

Proposals will then be made for the next phase in playground development An in-depth evaluation process will begin to assess the impact of the environment on various aspects of infant/toddler development and adult-child interaction.

VIII.Presentation Format:

One and one-half hour ,seminar.

IX.Presenter would be willing to present twice.